



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R10-OAR-2010-1071; FRL-9911-83-Region 10]

**Approval and Promulgation of Implementation Plans; State of Washington; Regional Haze
State Implementation Plan; Federal Implementation Plan for Best Available Retrofit
Technology for Alcoa Intalco Operations, Tesoro Refining and Marketing, and Alcoa
Wenatchee**

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA or Agency) is taking final action to partially approve and partially disapprove a State Implementation Plan (SIP) submitted by the State of Washington (State) on December 22, 2010, as meeting the requirements of Clean Air Act (CAA or the Act) section 169 and federal regional haze regulations and to promulgate a Federal Implementation Plan (FIP) for the disapproved elements of the SIP. As described in Part I of this preamble, this final rule approves numerous elements in the SIP including the State's Best Available Retrofit Technology (BART) determinations for a number of sources. This action also: Disapproves the NO_x BART determination and promulgates a Federal BART alternative for five BART emission units at the Tesoro Refining and Marketing refinery (Tesoro refinery) located in Anacortes, Washington; finalizes a limited approval and limited disapproval of the State's SO₂ BART determination and promulgates a Federal BART alternative for the Intalco Aluminum Corp. (Intalco facility) potline operation located in Ferndale, Washington; and disapproves the State's BART exemption for the Alcoa Wenatchee Works located in Malaga,

Washington (Wenatchee Works), determines that the Wenatchee Works is subject to BART, and promulgates Federal BART for all emission units subject to BART at the facility.

DATES: This final rule is effective on [insert date 30 days from the date of publication in the Federal Register].

ADDRESSES: The EPA has established a docket for this action under Docket Identification No. EPA-R10-OAR-2010-1071. All documents in the docket are listed on the www.regulations.gov Web site. Although listed in the index, some information may not be publicly available, i.e., Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through www.regulations.gov or in hard copy at the EPA Region 10, Office of Air, Waste, and Toxics, AWT-107, 1200 Sixth Avenue, Suite 900, Seattle, Washington 98101. The EPA requests that you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding Federal holidays.

FOR FURTHER INFORMATION CONTACT: Steve Body at (206) 553-0782, Body.Steve@epa.gov, or at the above EPA Region 10 address.

SUPPLEMENTARY INFORMATION: Throughout this document whenever "we," "us," or "our" is used, we mean the EPA. Information is organized as follows:

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I. Summary of our Final Action

The EPA is taking final action to partially approve and partially disapprove the Washington Regional Haze SIP submitted on December 22, 2010. In this action, the EPA is approving the following provisions of the Washington SIP: The identification of affected Class I areas and determination of baseline conditions, the natural conditions and uniform rate of progress (URP) for each Class I area; the emission inventories; the sources of visibility impairment in Washington's Class I areas; the State's monitoring strategy; the State's consultation with other states and Federal Land Managers (FLMs); the reasonable progress goals (RPGs); the long-term strategy (LTS); and the commitment to submit the periodic SIP revisions and 5-year Progress Reports.

In today's action, we are also approving the State's BART determinations for the BP Cherry Point Refinery, the Port Townsend Paper Company, the LaFarge North America facility, and Weyerhaeuser's Longview facility, as well as portions of the BART determinations for the Tesoro refinery and the Intalco facility. The EPA is disapproving Washington's NO_x BART determination and promulgating a BART Alternative for five emission units at the Tesoro refinery. The EPA is also finalizing a limited approval and limited disapproval of the State's SO₂ BART determination for the potlines at the Intalco facility and promulgating an SO₂ BART Alternative for the potlines, consisting of an annual limit of 80% of base year SO₂ emissions. Finally, the EPA is disapproving the State's BART exemption for the Wenatchee Works and promulgating BART for SO₂, NO_x, and PM emissions at the facility.

The resulting BART FIP for the Tesoro refinery, the Intalco facility, and the Wenatchee Works does not require the purchase or installation of new air pollution control equipment, but

rather establishes BART based on existing control technology. Thus, the only additional costs incurred by these facilities will be minimal expenditures for monitoring, reporting, and recordkeeping. The benefit to the environment is the prevention of visibility degradation due to potential future increases in emissions from changes envisioned at the facilities.

This final action is consistent with our proposed actions and meets the requirements of CAA sections 169A and 169B and 40 CFR 51.308.

II. Background

In the CAA Amendments of 1977, Congress established a program to protect and improve visibility in national parks and wilderness areas. *See* CAA section 169A. Congress amended the visibility provisions in the CAA in 1990 to focus attention on the problem of regional haze. *See* CAA section 169B. The EPA promulgated regulations in 1999 to implement sections 169A and 169B of the Act. These regulations require states to develop and implement plans to ensure reasonable progress toward improving visibility in mandatory Class I Federal areas¹ (Class I areas). 64 FR 35714 (July 1, 1999); *See* also 70 FR 39104 (July 6, 2005).

On behalf of the State of Washington, the Washington State Department of Ecology (Ecology) submitted its Regional Haze State Implementation Plan (Regional Haze SIP or SIP) to the EPA on December 22, 2010. In an action published on December 6, 2012, the EPA

¹Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6,000 acres, wilderness areas and national memorial parks exceeding 5,000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, The EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to “mandatory Class I Federal areas.” Each mandatory Class I Federal area is the responsibility of a “Federal Land Manager.” *Id.* 7602(i). When we use the term “Class I area” in this action, we mean a “mandatory Class I Federal area.”

approved BART provisions for the TransAlta Centralia Generation, LLC coal-fired power plant. 77 FR 72742.

On December 26, 2012, the EPA proposed to partially approve and partially disapprove the remaining portions of the Washington Regional Haze SIP covering the first implementation period (77 FR 76714). In that action, the EPA proposed to approve the following SIP elements:

We proposed to approve Washington's identification of affected Class I areas in the State. The State calculated the baseline visibility conditions in each Class I area using data from the Interagency Monitoring of Protected Visual Environments (IMPROVE) from monitoring sites representing each Class I area.

We proposed to approve the State's determination of natural conditions and the uniform rate of progress (URP) for each Class I area. Washington used the Western Regional Air Partnership (WRAP) derived natural visibility conditions. In general, the WRAP based their estimates on the EPA guidance document titled, "Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Program" (EPA-45/B-03-0005 September 2003). However, the WRAP incorporated refinements into its estimates that the EPA believes provide results more appropriate for western states than the general EPA default approach.

We proposed to approve the statewide emission inventory of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in the Class I areas. The WRAP, with data supplied by Washington, compiled emission inventories for all major source categories in Washington for the 2002 baseline year and for estimated emissions in 2018. Emission estimates for 2018 were generated from anticipated population growth, growth in industrial activity, and emission reductions from implementation of expected control measures,

e.g., implementation of BART emission limitations and reductions in motor vehicle tailpipe emissions.

We proposed to approve the State's identification of the sources of visibility impairment in each Washington Class I areas, which used the approach and modeling tools recommended by the WRAP. These modeling tools were state-of-the-science, and the EPA determined that these tools were appropriately used by WRAP for regional haze planning.

We proposed to approve the State's monitoring strategy. The primary monitoring network for regional haze in Washington is the IMPROVE network. There are currently IMPROVE monitoring sites that represent conditions for all Class I areas in Washington. The State commits to rely on the IMPROVE network for future regional haze implementation periods. Data from the IMPROVE network will be used for preparing the 5-year progress reports and the 10-year SIP revisions.

We proposed to approve the State's consultation with other states and FLMs. Through the WRAP, member states and the Tribes worked extensively with the FLMs from the U.S. Departments of the Interior and Agriculture to develop technical analyses that support the regional haze SIPs for the WRAP states. In addition, the State provided its proposed SIP to the FLMs for comment in March 2010. The State also consulted with the states of Idaho and Oregon, as well as the other WRAP member states and Tribes.

We proposed to approve the State-identified visibility improvement anticipated by 2018 in each of the Class I areas as a result of the BART emission limits established in the SIP. The projected improvement was determined by using the results of the Community Multi-Scale Air Quality (CMAQ) modeling conducted by WRAP. The WRAP CMAQ modeling predicted visibility impairment in each Class I area based on 2018 projected source emission inventories,

which included federal and state regulations already in place (“on the books”) and BART emission limitations.

We proposed to approve the State’s LTS because it includes the documentation and control measures necessary to achieve the RPGs at all Class I areas affected by the State’s sources. The State’s LTS included consideration of all anthropogenic sources of visibility impairment, including major and minor stationary sources, mobile sources, and area sources. The anticipated net effect on visibility over the first planning period due to changes in point, area, and mobile source emissions is an improvement in visibility in all Class I areas in Washington.

We proposed to approve the State’s commitment to develop and submit a comprehensive Regional Haze SIP revision to the EPA by July 31, 2018, and every ten years thereafter. The State also committed to submit a report to the EPA every five years that evaluates the progress being made towards the RPGs and the need for any additional control measures.

We proposed to approve the majority of the State’s BART determinations. The State appropriately identified all BART-eligible sources located in Washington and, with one exception, appropriately identified those BART-eligible sources that are subject to BART. In this action, we are finalizing our approval of these SIP elements as proposed.

In our December 26, 2012 and December 30, 2013 actions, we also proposed to disapprove the following SIP elements and promulgate a FIP to fill any gaps left by our partial disapproval:

We proposed a limited disapproval of the State’s SO₂ BART determination for Alcoa’s Intalco facility potlines. The State determined that installing new control technology was not cost-effective and that the level of existing control for the potlines was BART. We identified a

number of errors with the State's cost analysis that rendered the State's control determination unreasonable. We conducted our own analysis and determined that limestone slurry forced oxidation (LSFO) was SO₂ BART. However, Alcoa asserted that it could not afford LSFO at the Intalco facility and remain a viable business. In response, we conducted an affordability analysis, which included updated information as described in the December 30, 2013 proposal, and proposed to concur that LSFO was not affordable at the Intalco facility. Alcoa offered a BART Alternative of implementing pollution prevention measures, primarily the requirement of 3% or less sulfur in the anode coke, and limiting potline SO₂ emissions to 80% of base year emissions. We included this BART Alternative in our FIP. The BART Alternative makes Washington's pollution prevention requirements federally enforceable and makes the 20% SO₂ reduction from baseline permanent and federally enforceable.

We proposed to disapprove the State's NO_x BART determination for five emission units subject to BART at the Tesoro refinery. The State determined that NO_x controls were not cost-effective. We determined the State's cost estimates were unreasonably high because the State assumed that controls could not be installed when the facility is shut down for maintenance in the estimated 2017 turnaround cycle and still fall within the five year BART implementation period. Tesoro offered a BART Alternative consisting of exclusive use of low-sulfur refinery gas in several non-BART heaters and boilers in lieu of installing the NO_x BART controls. We included this BART Alternative in our proposed FIP.

We initially proposed to approve the State's determination that the Wenatchee Works did not contribute to visibility impairment in any Class I area and was therefore not subject to BART. During the comment period, however, we received adverse comments that the State's determination was based on visibility modeling that relied upon an unapproved and unproven

fine-grid modeling protocol. Consequently, we issued a supplemental notice of proposed rulemaking on December 30, 2013, and proposed to disapprove the State's determination that the Wenatchee Works was not subject to BART and also proposed a BART FIP (78 FR 79344). In that notice, we proposed to find that one of the four potlines at the Wenatchee Works, as well as some of the supporting emission units, are subject to BART. After evaluating various control technologies, we proposed to find that the costs of compliance and the anticipated visibility benefits did not warrant new controls at the facility. We therefore proposed that the existing controls at the facility were BART and proposed to adjust some emission limits in the facility's operating permit to reflect the level of emission reductions achievable by those existing controls.

This final action is the result of our initial proposed action, the re-proposal for the Wenatchee Works, and our consideration of all public comments received. This final action is consistent with our proposed actions. However, as explained below in the response to comments we revised 40 CFR 52.2470(d) to correct the list of conditions which are applicable to BP Cherry Point. Additionally, we revised the NO_x emission limit and made minor adjustments to the FIP provisions related to the Wenatchee Works. Finally, the compliance dates for the Wenatchee Works and the Tesoro refinery were slightly modified.

III. Response to Comments

We are responding to comments received on both the initial proposal and the re-proposal. However, the re-proposal summarized and responded to some comments received on the initial proposal. 78 FR 79347-79355. Those comments and our responses will not be repeated here. The following are our responses to the remaining comments received on the initial proposal for which we have not yet responded and new comments received on the re-proposal. We are also

responding to comments received on the additional information that was provided for public review in the re-proposal.

Comments:

A. BP Cherry Point Refinery BART Determination

Comment: One commenter noted that the BART Order 7836 for the BP Cherry Point Refinery included BART emission limits for boilers #6 and #7, despite the fact that these units were constructed in 2007 and are not BART-eligible emission units. These units should not be regulated in the BART Order. Thus, conditions 1.1, 1.3.1, 2.1, 3.1, and 6.1 of the BART Order should not be approved into the Washington SIP.

Response: The EPA agrees that the BP Cherry Point Refinery boilers #6 and #7 are not BART-eligible and thus not subject to BART. Subsequent to the publication of the initial proposal, the State of Washington sent the EPA a letter dated July 31, 2013, requesting that conditions 1.1, 1.3.1, 2.1 3.1 and 6.1 and Finding B.c. be withdrawn from their SIP submittal. These conditions and Finding B.c. will not be incorporated by reference into the SIP.

B. Tesoro-BART Alternative

Comment: Several comments were received on our initial proposal that the EPA should use dispersion modeling to demonstrate the visibility improvement from the proposed BART Alternative for the Tesoro Refinery and compare the results to the visibility improvement from BART.

Response: Based on consideration of the comments, we concluded that additional modeling analysis was appropriate for the BART Alternative demonstration at the Tesoro Refinery. The EPA requested Tesoro provide such a modeling demonstration. The results of that modeling were presented in the December 30, 2013 re-proposal. The modeling protocol and results were

posted in the docket for this action and the Federal Docket Management System (FDMS) site on December 30, 2013. The public was notified of its availability. 78 FR 79354-79355. The comments received on the initial proposal and our response regarding the need for dispersion modeling for the Tesoro BART Alternative, as set forth in the re-proposal, will not be reiterated here. The following is our response to the remaining comments received on the initial proposal, as well as new comments received on the re-proposal and the additional information that was provided for public review.

Comment: One commenter inquired whether the EPA evaluated the model input and output files that Tesoro used in modeling for the BART Alternative. Such a review is needed to verify that the proper model settings have been used and that only the emission rates for the listed emission units have been changed from the original modeling.

Response: The EPA reviewed the model input and output files and verified the proper settings were used.

Comment: A commenter questioned why the EPA used the annual average concentration limit for total reduced sulfur (TRS) content of refinery fuel gas rather than the maximum 24-hour rate as required by the BART Guidelines. The justification to use the annual average vs. the 24-hour maximum rate needs to be clearly included in the administrative record. The commenter said that if the justification cannot be made, then the BART Alternative should be rejected and the NO_x BART should be required.

Response: As described in our December 30, 2013 proposal, the purpose of visibility modeling is to demonstrate whether the BART Alternative provides greater reasonable progress than BART considering the different atmospheric chemistry between SO₂ and NO_x. The modeling described in the BART Guidelines is for determining the maximum potential

impact of a source at Class I areas and whether the source is subject to BART. The purpose of the more recent modeling here is to evaluate the relative visibility impacts from the atmospheric formation of visibility impairing aerosols of sulfate and nitrate. The absolute value of emission rates is not of concern, because we are evaluating the ratio of SO₂ to NO_x emission rates and the resulting relative visibility impairment.

It should also be noted that the model used the maximum monthly average total reduced sulfur (TRS) emission rate during the time period 2004-2006, not annual emission rates as stated by the commenter. *See* May 14, 2013 letter from Tesoro to the EPA.

Comment: A commenter suggested that trading SO₂ emissions for NO_x emissions does not meet the EPA's guidance on BART alternative programs. The commenter specifically references an EPA, Office of Air Quality Planning and Standards (OAQPS), Q&A document, August 3, 2006, that states, "The regulations, however, do allow States to adopt alternative measures in lieu of BART, so long as the alternative measures provide for greater reasonable progress than would be BART. Inter-pollutant trading is not allowed in a trading program alternative to BART."

Response: We believe the commenter has misunderstood the Agency's policy. The complete explanation of the policy is in the Federal Register action referenced in the Q&A document cited by the commenter. The Agency allows for inter-pollutant trading as long as it is based on a technically acceptable approach for demonstrating the BART Alternative provides for greater reasonable progress. The Federal Register action for the Regional Haze Rule (40 CFR 51.308) (RHR) explains:

...interpollutant trading should not be allowed until the technical difficulties associated with ensuring equivalence in the overall environmental effect are resolved. Some other emissions trading programs (e.g., trading under the acid rain program) prohibit emission trades between pollutants. An emissions trading program for regional haze might also need to restrict trades to common pollutants. Each of the five pollutants which cause or contribute to visibility impairment has

a different impact on light extinction for a given particle mass, making it therefore extremely difficult to judge the equivalence of interpollutant trades in a manner that would be technically credible, yet convenient to implement in the timeframe needed for transactions to be efficient. This analysis is further complicated by the fact that the visibility impact that each pollutant can have varies with humidity, so that control of different pollutants can have markedly different effects on visibility in different geographic areas and at different times of the year. Despite the technical difficulties associated with interpollutant trading today, EPA would be willing to consider such trading programs in the future that demonstrate an acceptable technical approach. 64 FR 35743.

This guidance on BART alternatives is primarily envisioned for large statewide, or region-wide (multi-state) emissions trading programs where emissions could be traded across large, geographically separated areas. 64 FR 35741-35743. The technical difficulties discussed in the above policy statement also are focused on situations where a BART alternative trading program is based on emission reduction equivalency in determining Better-than-BART results. In such a trading program, when SO₂ emissions are traded for NO_x emissions, the demonstration that the BART alternative provides greater reasonable progress may be technically difficult, or impossible, due to spatial, temporal, climate and meteorological differences between the sources in the program. In particular, the OAQPS Q&A document refers to a regional trading program. However, in this specific situation for the Tesoro Refinery, the BART Alternative is not a state-wide or regional trading program, but rather trading within the same facility. Therefore, the technical difficulties that may be associated with interpollutant trading in a state-wide or regional trading program are of less concern.

The Tesoro BART Alternative is confined to one facility with emissions of SO₂ and NO_x coming from essentially the same location. The CALPUFF model is used to estimate the impacts from all visibility impairing pollutants, including SO₂ and NO_x, and is the regulatory tool used to determine whether a BART-eligible source is subject to BART. We believe that the CALPUFF model used in Washington (and other states within EPA Region 10) to demonstrate visibility

impacts on Class I areas to evaluate whether sources are subject to BART, is technically adequate to demonstrate whether or not a BART Alternative measure that relies on interpollutant trading results in greater reasonable progress. As described in the Federal Register preamble to the RHR (64 FR 35734), it may be difficult to assess the impacts of different pollutants due to the potential difference in light extinction for a given particle mass and due to seasonal and geographic variations. The CALPUFF model, using the approved modeling protocol, addresses the different light extinction properties of different pollutants. In the Tesoro Refinery case, the emissions from both the BART and the BART Alternative emission units are from the same facility. Thus, the potential concern regarding interpollutant trading of emissions from emission units separated by large distances is not present. Also, because the model includes the three year baseline period, seasonal variation is also not a concern in this instance.

Comment: Several commenters stated that trading between BART and non-BART sources is not allowed.

Response: The preamble to the RHR encourages both BART and non-BART sources to be included in a BART alternative. 64 FR 35743. Specifically, "the regional trading program may include sources not subject to BART. Inclusion of such sources provides for a more economically efficient and robust trading program. The EPA believes the program can include diverse sources, including mobile and area sources, so long as the reductions from these sources can be accurately calculated and tracked." 64 FR 35743.

Comment: One commenter states that the NO_x controls for the five Tesoro Refinery emission units should be imposed as reasonable progress controls if they are not required as BART. The EPA should still require unit-specific NO_x controls on the five BART units as reasonable progress controls.

Response: The RHR provides states with the opportunity to establish alternative measures as an alternative to BART. As discussed previously, the RHR provides that a BART alternative measure can include non-BART emission units. This approach can result in a more cost-effective control strategy. Because we are proposing to approve the State's reasonable progress goals as providing sufficient progress for this planning period, we do not believe that any additional reasonable progress controls are necessary on the BART-eligible units at the Tesoro Refinery at this time. However, the State may consider these units for reasonable progress controls in the next regional haze SIP due for submittal to the EPA in 2018.

Comment: A commenter stated that the CAA instructs states to issue SIPs requiring BART, and provides a process for exempting a source from BART. The statute does not authorize the EPA to allow a source to escape its BART obligations other than through the exemption process.

Response: The commenter seems to be saying that by imposing a BART alternative, we are exempting Tesoro from BART. The Tesoro facility and the emission units associated with the BART Alternative are not exempt from BART. Rather, the facility is meeting its BART obligation through a BART Alternative measure as allowed under the RHR. 40 CFR 51.308(e)(2).

Comment: Several commenters suggested the SO₂ emission reductions in the BART Alternative are not surplus reductions. They say the emission reductions were needed to meet other CAA requirements including Prevention of Significant Deterioration (PSD) requirements. They also cite the H₂S concentration limit that is already part of a Federally enforceable permit. They also say the emission reductions were achieved prior to the SIP submittal.

Response: The RHR requires that emission reductions resulting from the alternative measure must be "surplus to those reductions resulting from measures adopted to meet requirements of

the CAA as of the baseline date of the SIP." 40 CFR 51.308(e)(2)(iv). When promulgating this requirement in 1999, the EPA explained that emission reductions must be "surplus to other Federal requirements as of the baseline date of the SIP, that is, the date of the emissions inventories on which the SIP relies. *See* 64 FR 35714, 35742; *see also* 70 FR 39143. "[W]hatever the origin of the emission reduction requirement, the relevant question for BART purposes is whether the alternative program makes greater reasonable progress." The Washington Regional Haze SIP relies on emission inventories in the baseline period 2002-2005. *See* Washington Regional Haze SIP, chapter 6, section 6.3, included in the docket for this action. Thus, reductions resulting from any measure adopted after 2002 are considered 'surplus' under 40 CFR 51.308(e)(2)(iv).

The EPA examined the permitting history for the Tesoro Refinery and confirmed that the emission reductions achieved through the installation and operation in 2007 of the flue gas desulfurization (FGD) system to remove sulfur from the refinery fuel gas (RFG) used to fire several heaters and boilers occurred after the emission inventory baseline and are surplus for the purposes of the alternative measure.

Comment: A commenter noted that the SO₂ reductions resulting from the modifications to the refinery gas system occurred for plant-specific reasons, not to meet a regulatory requirement. These reductions occurred in the past and will not be the result of imposing BART controls on any aspect of plant operations. The commenter requests that the EPA reject the BART Alternative in favor of the EPA BART proposal, which would result in additional reduction of nearly 500 tons of NO_x.

Response: As described previously, even if the emission reductions at this facility occurred for plant-specific reasons, the reductions may be considered surplus for

purposes of a BART alternative. Additionally, as previously explained, the EPA has determined and confirmed with modeling that the reductions resulting from the now federally enforceable requirement to operate the FGD system result in greater reasonable progress towards meeting natural visibility conditions than the NO_x controls that the EPA determined to be BART.

Comment: A commenter cited a letter dated September 16, 2011, from the EPA Region 5 to the State of Wisconsin that describes what emissions are considered surplus. The commenter further explained that the Economic Incentive Program (EIP) defines "surplus reductions to mean emission reductions that are not otherwise relied on in any of several programs, including reductions made to insure compliance with the NAAQS as well as reductions included in the relevant SIP." Thus the commenter stated that to the extent the SO₂ emissions requirements have been incorporated into the Washington SIP and relied on to meet other applicable requirements, they are not "surplus" under the EIP.

Response: As explained previously, we have determined that the emission reductions are surplus for BART alternative purposes and as such, this action is consistent with the EIP position that consideration (or credits) may only be given for surplus reductions. The SO₂ emission reductions resulting from the combustion of low-sulfur RFG in these heaters and boilers have not been incorporated into the Washington SIP, nor have they been relied on to meet any other applicable requirements of the Act. In our final action on the Wisconsin SIP, we noted that, "In cases like this where a subject is addressed by both the general guidance in the draft Economic Incentive Program Guidance and in program-specific guidance that more directly addresses specific statutory requirements, the EPA gives more weight to the regulatory provisions that are promulgated for the specific statutory requirements, in this case to the provisions of the regional

haze rule. As noted above, the regional haze regulations promulgated in 40 CFR 51.308 allow credit for reductions achieved after the baseline date of the SIP (2002), irrespective of any recommendations to the contrary in the draft Economic Incentives Program Guidance.” 77 FR 46592 (January 31, 2008.)

Comment: A commenter requested that the EPA evaluate BART for the Tesoro Refinery flare, Unit X-819, including consideration of flare minimization efforts to reduce emissions from this unit.

Response: BART is an emission limitation based on the five-factor analysis and considers the degree of reduction available through the application of the best system of continuous emission reduction for each pollutant that is emitted by an existing stationary facility. As reflected in our December 26, 2012, proposal, Unit X-819 is subject to BART and we agree with the State’s BART determination. We considered the flare requirements of other regulatory air pollution agencies to determine whether there are any available control techniques for reducing emissions from flares. In particular we reviewed the California, Bay Area Air Quality Management District (BAAQMD), Reg. 12, Rule 12, which requires San Francisco Bay Area refineries to prepare a flare management plan (FMP), to reduce the frequency and magnitude of flaring events. The rule provides for no specific control technology. Rather, it requires refineries to minimize the need to flare gases through careful planning of maintenance, start-up, and shutdown of various refinery processes. However, should an upset condition occur, it does not prevent or otherwise restrict flaring. It does not appear that the requirement for a FMP would represent BART.

Additionally, Tesoro and the State evaluated whether adding a second gas compressor to handle excess gas resulting from emergency vents and directed to the RFG system would be cost

effective. *See* SIP, appendix L. Tesoro determined it would cost \$21,960/ton of SO₂ removed and reduce emissions by 10 tons/year. We find that it is not cost-effective to require the addition of a second gas compressor at this facility as BART.

C. Intalco Facility:

As part of the December 26, 2012 proposal, we proposed that Alcoa could not afford limestone slurry forced oxidation (LSFO) as the basis for BART. As explained in the re-proposal, we received comments on the affordability determination, requesting that we update the affordability assessment with current information and expressing concern with the use of information that was not publically available. We responded to these comments in the re-proposal and explained that we obtained updated information and revised the 2012 Affordability Assessment. The Revised Affordability Assessment and supporting documentation was made available to the public for review as part of the re-proposal. We received no further comment on the Revised Affordability Assessment. We believe the updated analysis continues to support our determination that installation and operation of LSFO at the Intalco facility is not affordable.

A number of comments were received regarding our proposed BART determination for the Intalco facility. The comments focused on procedural issues, issues regarding the BART determination and the affordability analysis, and the BART Alternative.

Comment: A commenter asserted that the EPA proposed BART for Intalco fails to comply with the public notice requirements of the CAA because it is impossible for the public to understand and comment on the affordability claim because critical information is not available. The CAA forbids the EPA from promulgating a rule that relies in whole or part on information not included in the docket. The commenter stated that critical information regarding Alcoa's affordability claim had been excluded from the record, specifically Attachment 2 of Alcoa's June 2012 letter,

and that the failure to disclose this information means that they are unable to provide meaningful comment on Alcoa's claim that they cannot afford LSFO controls. Finally the commenter claimed that that the EPA has failed to identify any support in the CAA that permits the EPA to ignore the requirements of the CAA for public review and comment.

Response: The EPA recognizes the importance of making information available to the public so that the public can meaningfully comment upon proposed rules and, if they choose, ultimately challenge its rules. This task is somewhat more complicated when, as here, the rulemaking necessarily requires consideration of material claimed as Confidential Business Information (CBI). Nevertheless, the CAA, the EPA's implementing regulations, and other statutes impose stringent procedures for the use and availability of information claimed to be CBI, *See, e.g.*, 42 U.S.C. 7414, 33 U.S.C. 1318(b); 40 CFR 2.204, 2.205, and 2.301. As explained in the BART Guidelines, an economic analysis regarding how the installation of controls may impact the viability of continued plant operation must preserve the confidentiality of sensitive business information.

Alcoa provided information to the EPA to support its claim that the company cannot afford the installation of LSFO. *See* June 22, 2012 Alcoa letter to the EPA. Alcoa requested that Attachment 2 of the letter be treated as confidential.

Under the CAA and EPA's regulations, a company may assert a business confidentiality claim covering information furnished to the EPA. 40 CFR 2.203(b). Once a claim is asserted, the Agency must consider the information to be confidential and must treat it accordingly either until the EPA determines that the information is not subject to CBI protection or until the EPA determines that release of the information is relevant to a proceeding and in the public interest. 40 CFR 2.205, 2.301(g). The EPA's regulations set forth the specific procedures that the EPA

must follow when making a CBI determination. 40 CFR 2.204, 2.205, and 2.301(g). Under the regulations, the EPA must provide the affected businesses with notice and, usually, an opportunity to comment on the impending CBI determination or release, including an opportunity to justify their CBI claims. *See, e.g.*, 40 CFR 2.204(e), 2.209(d), and 2.301(g)(2).

Following the procedures outlined in 40 CFR part 2, the EPA requested that Alcoa substantiate its CBI claim. The company narrowed its CBI claim but informed us that portions of Attachment 2 were still claimed as CBI and provided a version of Attachment 2 with the CBI information redacted. The redacted information consists of six years (2008-2013) of "after tax" cash flow values. After consideration of applicable information, requirements and case law, the EPA completed its CBI determination and found that the redacted information in Attachment 2 constitutes CBI within the meaning of the CBI regulations. The final CBI determination is dated July 10, 2013. Accordingly, the information may not be disclosed to the public at this time.

When the EPA assembled the record for this rulemaking, it physically separated the CBI portion of the record from the rest of the publicly available record. The EPA placed into the public record all information for which no claim of CBI was asserted. Any information or analyses based on CBI, was presented in such a way to avoid disclosing the underlying CBI. In addition, the EPA placed into the public record the Revised Affordability Analysis which included an extensive list of references to other publicly available information relevant to the economic analyses, such as company-specific public financial reports, cost information reported in trade journals and industry conference presentations, and price quotations obtained from vendors.

Subsequent to the proposal and in response to comments, the EPA conducted additional analysis regarding Alcoa's affordability claim. More specifically, the EPA reviewed the recent

long term power supply contract between Alcoa and the Bonneville Power Administration (BPA) which established the amount and rate at which electricity would be supplied to the Intalco facility. The EPA also conducted additional investigation to obtain publically available and updated financial information and economic forecasts regarding the aluminum industry. This new and additional information was placed in the docket and made available for public review on December 30, 2013. The docket also contains the June 22, 2011 Alcoa letter with the redacted version of Attachment 2. As is evident by the list of documents in the docket, a considerable amount of information regarding Alcoa's financial condition is included and has been made available for public review.

The publicly available information taken together with the EPA's Affordability Analyses, and the description of our analysis in the prior Federal Register proposals are sufficient to support and explain today's final action. Therefore, for the reasons stated above, the EPA believes that the public record is adequate to allow meaningful review of the EPA's decision regarding Alcoa's claim that they cannot afford LSFO controls.

Comment: Referring to CAA section 110(k)(5), a commenter asserts that before the EPA may promulgate a FIP there must be a finding that the state implementation plan is substantially inadequate to comply with the CAA requirement. The commenter claims that because the Administrator has not made such a finding, has not notified Washington of the inadequacies of the SIP or that the SIP needs to be revised, and has not established a reasonable deadline to revise and submit a revised SIP, the proposed FIP is premature. This action is premature under CAA section 110(k)(5).

Response: The EPA disagrees with this comment. Section 110(k)(5) of the CAA states “[w]henver the Administrator finds that the applicable implementation plan for any area is

substantially inadequate to ... comply with any requirement of [the Act], the Administrator shall require the State to revise the plan as necessary to correct such inadequacies.” This provision requires the EPA to issue what is known as a “SIP call” whenever the EPA finds that a state’s *existing* SIP is substantially inadequate to meet CAA requirements. Importantly, this provision bears no relation to the EPA’s authority to review SIP submissions and revisions, which by definition are not incorporated into the state’s existing SIP until they have been approved by the EPA. Rather, when the EPA receives a SIP submission or revision from a state, CAA sections 110(k)(3) and 110(l) provide that the EPA can only approve the SIP if it meets all CAA requirements and would not otherwise interfere with any applicable requirement of the Act. If the EPA determines that a SIP submission or revision does not comply with all applicable CAA requirements, then the EPA must disapprove the SIP in whole or in part. At that time, CAA section 110(c)(1)(B) provides the EPA with the authority “to promulgate a Federal implementation plan at any time within 2 years” of the disapproval. Additionally, the EPA has the authority to promulgate a FIP after finding that a state has failed to make a required SIP submission or revision entirely or that a state has submitted an incomplete SIP. CAA section 110(c)(1)(A). The EPA’s obligation to promulgate a FIP does not expire unless the state corrects the deficiency, and the EPA approves the SIP before promulgating a FIP. CAA section 110(c)(1).

Here, Washington's Regional Haze SIP was due on December 17, 2007. On January 15, 2009, the EPA published notice of its finding that Washington and 36 other States, the District of Columbia, and the U.S. Virgin Islands had failed to timely submit their regional haze SIPs. 74 FR 2392 (January 15, 2009). The notice explained that the finding started the “two year clock” for the promulgation by the EPA of a FIP. The notice also explained that the EPA’s FIP

obligation would expire only if a state submitted a SIP and the EPA approved that SIP before the EPA had promulgated a FIP. At approximately the same time as the notice was signed, the Region 10 Administrator sent a letter to the Department of Ecology informing the Director that Washington had failed to make the required regional haze SIP submission and explaining that within two years, the EPA would need to either fully approve the Washington Regional Haze SIP or promulgate a FIP. EPA sent similar letters to the other states, the District of Colombia, and the U.S. Virgin Islands.

Washington submitted its Regional Haze SIP on December 22, 2010. As we explained in the December 26, 2012 proposal, the EPA could not approve the entire SIP. 78 FR 79344. Thus, the EPA proposed to disapprove in part the Washington Regional Haze SIP and proposed to promulgate a FIP to fill the gaps left by the EPA's partial disapproval. *See* CAA section 302(y). Thus, based on both the EPA's prior finding of failure to submit *and* the EPA's partial disapproval of the Washington Regional Haze SIP, the EPA has the authority and obligation to promulgate a FIP. We also note that the EPA's authority to issue a FIP in these circumstances has been upheld recently by both the Eighth and Tenth Circuit Courts of Appeal. *North Dakota v. EPA*, 730 F.3d 750, 759 (8th Cir. 2013), *Oklahoma v. EPA*, 723 F.3d 1201, 1222–24 (10th Cir. 2013).

Comment: A commenter stated that the EPA's proposed action of limited approval and limited disapproval does not comport with the CAA or the regulatory requirements of 40 CFR 51, subpart P. More specifically the commenter asserts that: 1) the CAA requires the Administrator to approve a state's implementation plan 'in whole' if it meets applicable requirements; 2) Ecology dutifully executed its statutory and regulatory obligations by preparing and submitting a complete SIP, which included the requisite BART determinations, consistent with the CAA and

promulgated regulations; 3) the EPA's partial disapproval is unfounded either because the EPA has not shown that Ecology's BART determination is not grounded in its thorough consideration of the five factors or because the EPA abused its statutory discretion with regard to rendering its analysis of the cost of compliance; and 4) it is the State's obligation to determine BART. The EPA does not have the authority to override Ecology's cost estimates and BART determinations.

Response: As explained in our initial proposal, the Washington Regional Haze SIP does not meet all of the applicable CAA requirements. Therefore the EPA proposed a partial approval and partial disapproval. Specifically, the EPA does not agree that the State's BART determinations for the Intalco facility and the Tesoro Refinery are consistent with the EPA's regulations. The EPA agrees that in the first instance, it is State's obligation to determine BART, but contrary to the comment, the EPA does have the authority to disapprove Ecology's cost of compliance estimates and BART determinations when it finds that they are not in compliance with the applicable CAA requirements.

The commenter's claim that the EPA has failed to show that Ecology's BART determination is not grounded in its thorough consideration of the five factors or that it abused its statutory discretion is not supported by the record. As explained in our initial proposal, and further described here, there are deficiencies in the State's cost of compliance calculations for the Intalco facility. As also explained, the State's BART determination for Tesoro is no longer accurate because it was based on the assumption that the retrofit would need to occur before the next scheduled maintenance shutdown period (turnaround) which would significantly increase the cost. This assumption is no longer valid because the retrofit may occur during a scheduled Tesoro turnaround and is now considered cost-effective. Also importantly, Intalco and Tesoro both requested that the EPA consider a BART Alternative. The EPA then found that each BART

Alternative would result in greater overall reasonable progress towards attaining the national visibility goal than would requiring BART. We therefore proposed these BART Alternative measures instead of BART.

Comment: A commenter stated that the EPA Region 10 referenced sections of the EPA Air Pollution Control Cost Manual that are irrelevant to SO₂ control technologies but then the EPA Region 10 disregarded an SO₂-specific example in section 5 of the Control Cost Manual which uses a 15-year equipment lifetime. The commenter further claimed that by using a 30-year equipment lifetime in the cost effectiveness calculations for the LSFO scrubber, the EPA Region 10 ignored agency precedent from the EPA Regions 4 and 8 and that on more than one occasion Region 8 has had sources reanalyze annualized costs for scrubbers using 15-years.

Response: The EPA Air Pollution Control Cost Manual² (Cost Manual) states that the actual expected equipment lifetime of an air pollution control device should be used for purposes of cost calculations. Section 1, chapter 2 of the Cost Manual addresses the capital recovery factor (CRF), which is determined using the control equipment lifetime and interest rate. The Cost Manual clearly defines the control equipment lifetime as the entire life of the control. For example, on page 2-19, the Cost Manual states: “For each alternative: calculate a discounting factor each year over the life of the equipment...” and on page 2-21: “In essence, annualization involves establishing an annual ‘payment’ sufficient to finance the investment for its entire life, using the formula...[CRF]...where PMT is the equivalent uniform payment amount over the life of the control, ‘n’, at an interest rate, ‘i.’” The variable ‘n’ in the CFR equation used to annualize total capital investment is thus the actual life of the control.

² U.S. Environmental Protection Agency, *Air Pollution Control Cost Manual, Sixth Edition*, January 2002. Section 1 - Introduction, Chapter 2 - Cost Estimation: Concepts and Methodology. p. 2-19 through 2-21. EPA-452/B-02-001.

The commenter provided no basis for the 15-year equipment lifetime. Rather the comment simply pointed to examples of different situations or types of control technologies where 15 years was used. The commenter's citation of specific equipment lifetimes within calculations in the Cost Manual implying that these specific lifetimes must always be used for a particular control technology is incorrect. The 15-year equipment lifetime contained within section 5 of the Cost Manual does not preclude the use of a different, better supported time period for the equipment lifetime of packed tower absorbers, the technology addressed in section 5.

In this case, as explained in the proposal, we determined that 30 years is a reasonable and well founded estimate of the expected life of wet FGD systems, such as LSFO. This determination considered among other things standard cost estimating handbooks,³ published papers,⁴ and published EPA reports⁵ that report 30 years as a typical life for a scrubber as well as industry reports that identify specific scrubbers in operation since the 1970s and 1980s.⁶ Additional support for a 30 year scrubber life can also be found in the EPA Response to Comments for the final Oklahoma Regional Haze FIP.⁷

Region 10's use of a 30-year life is not inconsistent with other Agency decisions; the EPA Region 6 used 30 years for SO₂ spray dry scrubbing on energy generation units in the final Oklahoma FIP. The EPA Region 6 research included wet FGD technologies such as LSFO, and indicated that the 30-year lifetime was equally applicable to both wet and spray dry FGD

³ Vatauvuk, W.M., *Estimating Costs for Air Pollution Control*. 1990: Lewis Publishers. p. 198.

⁴ Warych, J., Szymanowski, M., *Optimum Values of Process Parameters of the "Wet Limestone Flue Gas Desulfurization System"*. Chemical Engineering Technology, 2002. 25: p. 427-432.

⁵ Kaplan, N., *Retrofit Costs of SO₂ and NO_x Control at 200 U.S. Coal-Fired Power Plants*, September 11, 1990.

⁶ Electric Power Research Institute, *Flue Gas Desulfurization Systems: Component Material Performance and Welding*. December 2005.

⁷ U.S. Environmental Protection Agency, *Response to Technical Comments for Sections E. through H. of the Federal Register Notice for the Oklahoma Regional Haze and Visibility Transport Federal Implementation Plan*, December 13, 2011. Docket No. EPA-R06-OAR-2010-0190.

scrubbing. The EPA action on the Oklahoma Regional Haze FIP occurred subsequent to the EPA Region 8 letters cited by the commenter. The Region 4 action cited by the commenter reflects the EPA approval of a case-specific BART determination made by the State of Tennessee, and does not necessarily reflect EPA endorsement of all aspects of the underlying BART analysis conducted by the facility in question.

Combined, the EPA Region 6 research and analysis and the subsequent related work by the EPA Region 10 reflect a current and robust technical basis for both spray dry and wet scrubbing FGD equipment life. We therefore find that use of 30 years as the equipment life for LSFO in the Intalco BART analysis remains appropriate.

Comment: A commenter stated that the EPA Region 10 decision to use the lower of two vendor air pollution control cost quotes is arbitrary and instead we should have used the average of the two quotes. The commenter states that it is inconsistent that the EPA Region 10 would assert that it was improper for Washington to rely on the average of the two quotes when the EPA Region 4 concluded that Tennessee's BART analysis relying on the same average costs was reasonable. The comment also states that the EPA Region 10's use of the lower of the two quotes is inconsistent with an EPA Region 9 action that "relied primarily on the highest of several cost estimates...."

Response: As described in the initial proposal and supporting documents, it is appropriate to base the cost of compliance calculation on the lower of the two vendor quotes. While not explicitly stated as a directive in section 1, chapter 2 of the Cost Manual (which discusses general methodology), the Cost Manual includes a discussion indicating support for the use of the most competitive, lowest responsive bid within cost effectiveness calculations. In Section 6, chapter 3, the Cost Manual states that "[s]ignificant savings can be had by soliciting multiple

quotes,”⁸ and in section 4.2, chapter 1, the Cost Manual suggests that vendor quotes be “compare[d] to other bids.”⁹ These sections inherently recognize the practice of competitive bidding in the contracting process with the goal of procuring air pollution control equipment using the most cost effective option.¹⁰ That these statements are made within chapters of the Cost Manual that address specific control technologies does not reduce their applicability to cost effectiveness calculations in general.

The two vendor quotes were from experienced, reliable equipment vendors, and the lower of the two quotes was in fact more robust and detailed.

Using the lowest responsive bid also makes common sense from a contracting perspective. Given multiple responsive bids from well qualified equipment suppliers, it is reasonable to expect that the lower cost supplier is most likely to be chosen to provide the control equipment. The use of the average of multiple bids, as advocated by the commenter, is illogical since the resulting cost does not reflect the actual cost of control equipment from any supplier.

We acknowledge that the EPA Region 4 approved the State’s decision regarding the BART analysis for the Alcoa facility in Tennessee. However, Region 4 did not initiate this approach, but rather approved the State’s approach. In instances where the EPA is conducting the BART analysis (rather than the EPA reviewing a state’s analysis), we are consistent.

Contrary to the comment, the Region 9 and Region 10 approaches regarding cost are consistent. The EPA Region 9 BART cost analysis for the Four Corners Power Plant (FCPP)

⁸ U.S. Environmental Protection Agency, *Air Pollution Control Cost Manual, Sixth Edition*, January 2002. Section 6 – Particulate Matter Controls, Chapter 3 – Electrostatic Precipitators. p. 3-38. EPA-452/B-02-001.

⁹ U.S. Environmental Protection Agency, *Air Pollution Control Cost Manual, Sixth Edition*, January 2002. Section 4.2 – NO_x Post Combustion, Chapter 1 – Selective Non-catalytic Reduction. p. 1-29. EPA-452/B-02-001.

¹⁰ U.S. Environmental Protection Agency, *Air Pollution Control Cost Manual, Sixth Edition*, January 2002. Section 4.2 – NO_x Post Combustion, Chapter 1 – Selective Non-catalytic Reduction. p. 1-30. Chapter 2 – Selective Catalytic Reduction. p. 2-40. EPA-452/B-02-001.

was based on a combination of cost information submitted from equipment suppliers as well as information based on the Cost Manual. In the course of developing the FCPP FIP, the EPA Region 9 received three bids from the same vendor containing pricing information that was updated as the project proceeded. The second bid submitted was the highest cost bid. The EPA Region 9 used the second bid in their cost analysis because the third bid, which reflected lower costs, was submitted later in the BART analysis process and the overall difference between the three bids was not significant enough to affect the cost effectiveness determination.

The EPA Region 9 statement in the action cited by the commenter¹¹ was intended to communicate that the EPA Region 9 considered the costs to be conservatively high, which still resulted in the control equipment being determined to be cost effective. This position is stated more explicitly in the technical support document for the FCPP BART FIP developed by the EPA Region 9: "...the EPA's revised cost information and our additional analysis that rely on the capital and annual costs are conservatively overestimated."¹²

Additionally, we note that the EPA Region 9 did not accept the bid as submitted, but revised numerous cost elements based on independent research, competing equipment supplier bids for certain control equipment elements, and information contained in the Cost Manual. Therefore, the final cost numbers used in the EPA Region 9's analysis, while based on the highest of the three base vendor bids, were lower than the third vendor bid due to the changes made by the EPA Region 9.

¹¹ U.S. Environmental Protection Agency, *Source Specific Federal Implementation Plan Best Available Retrofit Technology for Four Corners Power Plant: Navajo Nation*. Final Rule. Docket Number EPA-R09-OAR-2010-0683. 77 FR 51620.

¹² U.S. Environmental Protection Agency, *Proposed Rule: Source Specific Federal Implementation Plan Best Available Retrofit Technology for Four Corners Power Plant: Navajo Nation, Technical Support Document*. Docket Number EPA-R09-OAR-2010-0683, p. 30.

Thus, the EPA Region 9 action in fact relied on the principles of competitive bidding where appropriate, consistent with the EPA Region 10 action.

Comment: A commenter states that the EPA Region 10 cost analysis disregarded the fact that the EPA Region 10's internal economic analysis concluded that the gypsum by-product market is speculative and did not prove there would be a guaranteed market for the gypsum in the future. The commenter also states that the EPA Region 10 ignored relevant market information provided by Alcoa and that this biased the EPA Region 10's control cost estimate in favor of controls being deemed cost effective.

Response: The EPA Region 10 continues to believe it is unreasonable to assume that the gypsum produced by LSFO would require disposal in a landfill given its suitability as a feedstock in many re-use applications and that it is appropriate to eliminate the disposal cost for purposes of the cost effectiveness analysis. The assumption that the by-product gypsum would be reused is consistent with the approach taken in a 2003 technology evaluation conducted by Sargent and Lundy, where a disposal cost of zero was used.¹³

Contrary to the comment, the EPA Region 10 did consider all information submitted by Alcoa, including the letter dated June 22, 2012. In this letter, Alcoa outlines technical challenges associated with re-use of the gypsum in various potential applications, but includes no discussion regarding potential resolutions of these technical challenges. The EPA Region 10 found that the financial incentive to avoid disposal costs for a re-usable product would encourage reuse. For example, although moist synthetic gypsum may be inappropriate for use in cement manufacturing, dry synthetic gypsum may be appropriate. In a cost analysis conducted by Sargent and Lundy for the LSFO scrubber built for the coal-fired power plant in Centralia

¹³ Sargent & Lundy LLC, *Wet Flue Gas Desulfurization Technology Evaluation*, January 2003. http://www.lime.org/documents/uses_of_lime/wet_fgdt2003.pdf

Washington,¹⁴ it was assumed that the gypsum by-product would be re-used, and a gypsum credit of \$5/ton was assumed. In fact the gypsum produced by Centralia plant was re-used by local wallboard manufacturers.^{15, 16}

The EPA Region 10 further believes that, were landfill disposal required, the disposal cost assumed in the original Alcoa BART analysis of \$145/ton is excessively high. The 1996 Sargent & Lundy report cites landfill disposal costs of only \$6/ton, and a more recent Sargent & Lundy paper cites landfill disposal costs of only \$12/ton for a similar waste product from dry FGD.¹⁷ A disposal cost several times higher than that cited by Sargent & Lundy would not significantly impact the cost effectiveness determination for LSFO at Intalco.

Thus, while recognizing some gypsum market uncertainty, we conclude that the gypsum disposal costs are properly excluded in the cost effectiveness calculation for LSFO.

Comment: One commenter requested the EPA reject the affordability argument as the affordability claim is unprecedented and the EPA's reliance on affordability in this instance is inconsistent with the EPA's approach to BART determinations across the country. The commenter asserted that because the EPA has proposed and/or finalized BART determinations in other areas that have contributed to power plants shutting down because the electrical generating units (EGUs) were not profitable enough after accounting for the cost of pollution controls (e.g. New York, Oklahoma, Four Corners, Boardman, and TransAlta) that the EPA must explain the different outcome for this BART determination. Intalco is the only BART determination where

¹⁴ Sargent & Lundy LLC, *Cost Study for a 1,400 MW Flue Gas Desulfurization Unit, Centralia Units 1 & 2*, October 1996.

¹⁵ "TransAlta and George Pacific Share Win-Win Situation". Daniel Brunell. Association of Washington Business online article. July-August 2004.
http://www.awb.org/articles/environment/transalta_and_georgia_pacific_share_win_win_situation.htm

¹⁶ "Why Centralia Matters to Washington State". TransAlta. April 2010.
<http://www.transalta.com/sites/default/files/Why-Centralia-Matters.pdf>

¹⁷ Sargent & Lundy LLC, *Economics of Lime and Limestone for Control of Sulfur Dioxide*, 2003.
http://www.graymont-mx.com/technical/Economics_of_Lime_and_Limestone_Control_Sulfur_Dioxide.pdf

a company is excused from complying with the law on the grounds that it cannot ‘afford’ the law.

Response: The BART Guidelines explain that, even where a control technology is cost-effective, “there may be cases where the installation of controls would affect the viability of continued plant operations.” 40 CFR part 51, appendix Y, section IV.E.3.1. In these unusual circumstances, the BART Guidelines allow states and the EPA to take into consideration how requiring controls could affect “product prices, the market share, and profitability of the source.” *Id.* section IV.E.3.2. Nevertheless, only when these effects are “judged to have a severe impact on plant operations” can they play a role in the ultimate control determination. The affordability analysis we conducted for Intalco was therefore proper. As explained in our re-proposal, the results of the analysis demonstrated that requiring controls at the Intalco facility would have a “severe impact” on the facility’s ability to continue business operations. The examples cited by the commenter, on the other hand, are inapposite. In those instances, none of the sources submitted affordability analyses to the EPA as part of the BART evaluation process. While the sources may have determined that it was in their financial interest to cease operating certain EGUs rather than install pollution control technology, the EPA has no reason to believe that the sources could not afford the controls in question. Rather, the sources made voluntary business decisions that the benefits of continuing to generate electricity at the affected units were outweighed by a number of factors, which likely included the costs of controls, potential future regulatory requirements, market trends, the availability of alternative generating strategies, etc. The EPA has no evidence to suggest, however, that the costs of controls in those instances were so onerous that the sources simply could not afford them or that the sources’ decisions to cease operations were in essence involuntary.

Comment: One commenter requested the EPA's or Ecology's commitment to revisit the BART determination for the Intalco facility every 10 years based on then current information. Two commenters recommended that the EPA explain how the Intalco facility will be reevaluated in the 5-year report or next SIP planning cycle to determine if LSFO does become affordable in the future.

One commenter would like the EPA or Ecology to commit to revisiting the BART determination for Intalco in each round of revised regional haze SIPs (i.e., every 10 years) utilizing the technological and financial information that is current for this source at that time.

Response: BART is a 'one time' decision that is not required to be revisited in future planning cycles. However, the source could in the future be subject to an analysis of control to achieve reasonable progress, should a new breakthrough in technology occur and cost effective controls be identified. The RHR explains that "After a state has met the requirements for BART, or implemented an emission trading program, or other alternative measure that achieves more reasonable progress than the installation and operation of BART, BART eligible sources will be subject to the requirements of paragraph (d) of this section in the same manner as other sources." 40 CFR 51.308(e)(5).

A commitment to revisit whether cost effective controls are available for a particular source in the future is not a required SIP element of this planning cycle and is not required for the EPA to approve the regional haze plan. A stated intention in the State's SIP submittal to revisit controls in the future is not an enforceable requirement. Accordingly the EPA's approval today is not conditioned upon the State's commitment to conduct future control technology reviews on a specific schedule.

Comment: One commenter recommended that the EPA consider the number of Class I areas impacted.

Response: The EPA considered the fact that Intalco had impacts greater than 0.5 deciview (dv) at six Class I areas. Additionally, we took into account Intalco's significant impact of over 1 dv at Olympic National Park. Thus, as explained in the proposal, the EPA considered cumulative visibility impacts, as well as the other BART factors in reaching its BART determination for this facility. *See* 77 FR 76191.

Comment: A commenter suggested that it was improper to use baseline emissions rather than future (or even current) conditions to assess visibility improvement.

Response: As previously described in our response regarding Tesoro's baseline emissions, the BART Guidelines (40 CFR part 51, appendix Y) provide, "In general, for existing sources subject to BART, you will estimate the anticipated annual emissions based upon actual emissions from a baseline period." 40 CFR part 51, appendix Y, section IV.D.4.d.1. The baseline period in the Washington SIP submittal for emissions used in the BART analysis is 2002-2005. The BART Alternative analysis correctly used the highest 24-hour emission rate in the baseline period to assess visibility improvement.

Comment: One commenter requested that the EPA clarify that the modeled BART Alternative improvements are not improvements from current conditions.

Response: Intalco has seen dramatic fluctuation in production over the last decade ranging from no production to production at approximately 80% of full operation. Thus, visibility improvement in Class I areas impacted by the Intalco facility will vary based on operating rates. The Intalco facility is currently operating at slightly less than 80% of full operation. As stated in the Federal Register proposal of December 26, 2012, the proposal to limit SO₂ emissions to 80%

of baseline, combined with making the other components in the BART Alternative permanent and federally enforceable, will prevent degradation if the Intalco facility increases production above 80%. 77 FR 76193.

D. Alcoa Wenatchee Works

Comment: Several commenters suggested that the Alcoa Wenatchee Works was improperly exempted from BART review. This comment is based on Ecology's use of refined air quality dispersion modeling (0.5 km grid) which the commenters believe underestimates visibility impact. The commenters asserted that the use of fine grid modeling inappropriately underestimates the Wenatchee Works impacts at the Alpine Lakes Wilderness Area to a level below the BART threshold thus allowing it to be improperly exempt from BART. Allowing the use of fine grid modeling is contrary to numerous prior statements by the EPA. The commenters requested that the EPA disapprove Washington's BART exemption determination and conduct a BART analysis for the Wenatchee Works.

Response: In response to the comments, the EPA re-evaluated the dispersion modeling that the State used to exempt the Wenatchee Works from BART. On December 30, 2013, we published a proposed rulemaking action where we explained our rationale for proposing to disapprove the State's BART exemption determination, proposing that the facility was subject to BART, and proposing a BART FIP for the Wenatchee Works. 78 FR 79344.

The adverse comments on that re-proposal are addressed below.

Comment: A commenter asserts that the EPA failed to address and resolve deficiencies in the Draft "*Modeling Protocol for the Application of the CALPUFF Modeling System Pursuant to the Best Available Retrofit Technology (BART) Regulation*" (the draft Three State Protocol) as identified by Alcoa to the EPA in a June 30, 2006 letter to EPA Region 10. The commenter claimed that this

failure adversely affected the subject-to-BART modeling activities and improperly determined visibility impairment within the State of Washington.

Response: The major concern raised in the June 30, 2006 letter was that the draft Three State Protocol did not include a provision to allow for site specific protocols that include technical enhancements, such as better resolution and other site specific improvements. The June 30, 2006 letter requested that such enhancements be allowed in the BART exemption modeling and the BART determination modeling. It also stated that the 4 kilometer (km) grid resolution¹⁸ did not replicate on-the-ground terrain features such as valley flow and land/water boundaries. For purposes of this action, a 4 km grid is considered a course grid and a 0.5 km grid is considered to be a fine grid.

The final Three State Protocol provided for site specific protocols. Deviations from and site specific improvements to the Three State Protocol are allowed. The *Modeling Protocol for Washington, Oregon, and Idaho: Protocol for the Application of the CALPUFF Modeling System Pursuant to the Best Available Retrofit Technology (BART) Regulation* (the final Three State Protocol) states in section 1.1 that:

This modeling protocol is a cooperative effort among Idaho Department of Environmental Quality (IDEQ), Oregon Department of Environmental Quality (ODEQ), and Washington Department of Ecology (WDOE) to develop an analysis that will be applied consistently to the Idaho, Washington, and Oregon BART-eligible sources. The U.S. Fish and Wildlife Service, National Park Service, U.S. Forest Service, and U.S. EPA Region 10 were consulted during the development of this protocol (EPA 2006a, b, c). This protocol adopts the BART Guideline and addresses both the BART exemption as well as the BART determination modeling. The three agencies are also collaborating on the development of a consistent three-year meteorological data set. Collaboration on the protocol and meteorological data set helps ensure modeling consistency and the sharing of resources and workload.

¹⁸ Grid resolution is the distance between points for which model data is established. In this case the data is the elevation above mean sea level. A course grid may miss changes in elevation in mountainous terrain (i.e. river valley features) and the model may not account for channeling of wind flow. The grid points are also the points where estimated pollutant concentrations and visibility impairment are calculated.

As stated above, the development of the Three State Protocol was a collaborative effort that included seven government agencies. The Three State Protocol was viewed as guidance and not a prescription of how the modeling must be done in all cases. Consequently, if a BART-eligible source preferred to deviate from the Three State Protocol, such as generate its own predicted mesoscale meteorology simulations or employ a different grid resolution, as in the Wenatchee Works case, the state with jurisdiction would consult with the other six government agencies, including the EPA, before accepting the deviation. The purpose of the consultation is to resolve differing opinions on the deviation, ensure consistency and the integrity of the Three State Protocol, and maintain fairness to the BART-eligible sources. The EPA's endorsement of significant deviations from the Three State Protocol is necessary to effectively evaluate the SIP for technical adequacy in this important case of exempting a source from BART. As described below, the EPA had concerns with the deviation.

In July 2008, the EPA Region 10 communicated to Washington our concerns regarding use of fine grid modeling for the Wenatchee Works. In a July 8, 2008 e-mail message to Ecology we stated, "Nevertheless, R10 is willing to allow the use of new procedures, techniques or options as long as an acceptability demonstration is made in accordance with applicable guidance and is fully vetted by peers." The e-mail also explained that, "[t]he CALPUFF modeling system has never been evaluated or tested against tracer gas studies/experiments using a fine grid. As a minimum, Ecology and TRC should have submitted a protocol to R10 for acceptance to evaluate and test the sensitivity using a fine grid resolution in CALPUFF Version 5.8." The State failed to address these concerns.

Comment: A commenter claims that the EPA “cherry picked” statements and portrayed out of context, portions of the EPA’s 2009 Modeling Clearinghouse Memorandum and misrepresented its relevance to the Wenatchee Works BART exemption modeling.

Response: The EPA disagrees with the commenter that the Modeling Clearinghouse Memorandum, dated May 15, 2009, was taken out of context to justify the rejection of the Wenatchee Works BART exemption modeling. The memorandum states in part that, “...the Otter Tail Protocol presents no scientific evidence to support the claim that 1 km CALMET resolution increases the objective accuracy of the final wind field, especially in areas of relatively modest topographic relief, such as for each of the three proposed domains.” Similarly, the commenter did not present any scientific evidence to support its claim that the proposed 500 meter grid resolution will adequately capture the terrain influenced wind flows (e.g., valley and slope) at its river valley location.

CALMET is a diagnostic meteorological model that produces non-steady-state hourly meteorological data but has limited ability to independently capture the full three-dimensional structure of complex wind flows at the Wenatchee Work’s river valley location. Unlike the Otter Tail situation where the benefit may be limited, the EPA believes a network of meteorological monitoring stations (e.g., surface and upper air measurements) at the river valley location would better capture the three-dimensional, non-steady-state meteorology of this site. These data could be used to create a more accurate wind field that could then be used to more accurately predict the visibility impact from the Wenatchee Works.

Comment: A commenter questioned the value of revising the PM emission limitations that are being required of various emission units at the Wenatchee Works. The commenter states that the potential visibility improvement resulting from the reduction in allowable emissions is below the capability of the model to determine. Any potential visibility improvement that may

accrue from imposing the SO₂ limit on Potline 5 would far exceed that of the direct PM_{2.5} being emitted by these stacks. However another commenter said, “We support retaining the existing particulate matter limit of .005 gr/dscf.”

Response: We acknowledge that tightening the particulate matter emission limits may have little effect on visibility improvement because the existing fabric filters are high efficiency control devices. However, in some instances the existing emission limits are well above the level that a properly operating fabric filter can achieve. BART is defined as an emission limit based on the degree of reduction achievable through the application of the best system of continuous emission reduction. The existing emission limits in some cases are not based on the degree of reduction achievable at this facility. The BART emission limits we are establishing reflect the achievable emission reductions for these units, and result in tighter limits.

Comment: A commenter said that they have been unable to ascertain the source of the emission factor for NO_x emissions from Potline 5. Additionally, they wonder about the value of an emission limitation based solely on the potline aluminum production rate and an emission factor. The commenter suggests three options; that the NO_x emission limit be removed, the emission factor be substantiated, or the emissions be based on actual monitoring.

Response: The EPA understands that this emission factor has been used by Alcoa to report NO_x emissions to the Department of Ecology for years. However, we recognize the lack of substantiation for the emission factor and Alcoa has indicated that they cannot quickly provide the EPA with a basis for the factor. In response to this comment, the EPA has revised the NO_x BART emission limit from the proposed 0.95 tons per calendar month to a “test and set” requirement that will require Alcoa to conduct source tests and develop a unit-specific NO_x

emission factor for Potline 5. That emission factor will then be used to establish a monthly NO_x emission limit for Potline 5.

Comment: A commenter states that the EPA erroneously asserts that there are “no” SO₂ emissions associated with Ingot Furnaces No. 1, 2, and 11. The commenter requests that the statement be corrected to indicate there are trivial amounts of SO₂ created during the combustion of natural gas. Should the EPA elect not to withdraw its proposed actions and approve the Washington SIP, the commenter asks that the EPA determine that BART for SO₂ for these furnaces be comparable to the BART limit proposed for NO_x, which is a limitation on the type of fuel that may be combusted.

Response: There are trivial amounts of SO₂ emissions from the Ingot furnaces. The total SO₂ emitted from the three Ingot furnaces is 0.014 t/yr. We consider these insignificant, but as requested by the commenter, we will establish a BART requirement for SO₂. We agree with the commenter that BART for SO₂ would be the continued combustion of natural gas in the Ingot Furnaces. Thus, we are requiring the combustion of natural gas as BART for NO_x emissions and are adding a provision that requires the combustion of natural gas as BART for SO₂ emissions as well.

Comment: A commenter suggests that the EPA appears to be inconsistent in the cost analyses produced for limestone scrubbing for SO₂. The commenter explains that, in what appears to be the final cost analysis (document #501 in the docket), the EPA has included no costs for gypsum disposal, but that documents #503 and #504 in the docket do contain a disposal cost for gypsum. Based on experience with similar useable waste materials the commenter states that the EPA should include a disposal cost for the gypsum produced by the limestone scrubbing system. The commenter has found that even a useful waste like

gypsum cannot be disposed of or given away at no cost to the source. At a minimum, the company generating the waste material has to cover the cost of storage and transport to a user.

Response: The commenter appears to be confusing cost analyses conducted by Alcoa (documents #503 and #504) with the EPA's cost analysis (document #501). A detailed response to the comment with regard to the inclusion of gypsum disposal cost in the cost analysis has been provided above addressing a similar comment regarding the SO₂ BART analysis for the Intalco facility.

Comment: A commenter states that the EPA Region 10 ignored agency precedent and other factual information in the development of the Wenatchee Works cost of compliance analysis when it relied on the cost analysis for a similar scrubber at the Intalco facility. The commenter states that the EPA made the same flaws in the Wenatchee analysis that it made in the Intalco analysis specifically: equipment life, use of vendor quotes, use of unsubstantiated costs, ignoring cost data provided by Alcoa, and using data that underestimate the cost of LSFO.

Response: This comment for the Wenatchee Works is similar to a comment about the Intalco BART analysis addressed above. See our response regarding the cost of compliance calculation for the Intalco facility. The same rationale for our response to the Intalco BART analysis comment applies to this comment regarding the Wenatchee Works.

Comment: A commenter suggests that the process description for the anode bake furnace at the Wenatchee facility is incorrect in the preamble to the December 30, 2013 re-proposal.

Response: The commenter is correct in that the carbon anodes are not used in an electric arc furnace, rather the facility produces aluminum from alumina via an electrochemical reduction process that occurs in "electrolytic reduction cells" commonly known as (pots) using the Hall-Heroult process.

Comment: A commenter said that provisions for alternative fuel use should be included, when a change to fuel use is permitted or required pursuant to governmental dictate.

Response: We understand that Alcoa may change to an alternate fuel in the future.

However, we cannot ensure that the requirement for BART is met by simply allowing for the use of an alternative fuel that is permitted or required by the government. If Alcoa chooses to change to a fuel other than natural gas, the normal process would be to request the EPA to revise this rule and establish an appropriate BART emission limit for the alternative fuel. We do, however, believe that we can provide for the situation where the use of an alternative fuel may be approved in a Prevention of Significant Deterioration (PSD) permit. It is the EPA's position that a Best Available Control Technology (BACT) emission limit for a pollutant established in a PSD permit will likely be at least as stringent as a BART emission limit for that pollutant. We have added a provision to this rule that would allow a federally-enforceable BACT emission limit for NO_x which is established in a PSD permit to supersede the BART emission limit for NO_x established in this rule.

Comment: A commenter notes there appears to be a discrepancy between the baseline SO₂ emissions and emissions reduced through LFSO at Potline 5. The proposal states that Potline 5 has a baseline emissions rate of 1000.8 tons of SO₂ per year. However, the supporting BART analysis appears to assume that an LFSO scrubber could reduce emissions by 1955 tons per year which would be greater than the annual baseline emissions.

Response: The EPA does not agree that there is a discrepancy between the SO₂ emission values for Potline 5 in the proposal and in the BART analysis. The 1000.8 tons per year value in the proposal is the baseline SO₂ emission rate which represents the actual annual

emissions from the Potline during the baseline period. The 1955 tons per year emission reduction in the BART analysis represents an estimate of the potential emission reduction from the maximum potential to emit from the Potline that could be expected from the application of LFSO.

Comment: A commenter said that the EPA should consider ways to monitor and make more easily enforceable the proposed BART emissions limits. Most of the units at the Wenatchee Works do not have continuous emissions monitoring systems (“CEMS”), and for many of the units, the EPA is proposing limits based on the content of the fuel or emissions per unit of production. For Potline 5, the EPA proposes a BART limit expressed as pounds of SO₂ per ton of aluminum produced, per calendar month. Potline 5 has the highest SO₂ emissions of any BART-eligible unit at the Wenatchee facility, but it does not currently have a CEMS. To gather more accurate data on the unit’s actual emissions and to ensure compliance with any emissions limit, the commenter believes that the EPA should require installation of a CEMS and express the emissions limit in terms of SO₂ emitted per month, as a rolling 30-day average.

Response: Emissions from primary aluminum plants have traditionally been regulated with emission standards in the form of pounds of emissions per ton of aluminum produced (*see, e.g.,* the EPA’s New Source Performance Standards for aluminum plants at 40 CFR part 60, subpart S, the EPA’s Maximum Achievable Control Technology standards for aluminum plants at 40 CFR part 63, subpart LL, and Ecology’s emission limits for aluminum plants at WAC 173-415). The EPA believes that establishing BART emission limits in the same form as the limits for other pollutants set under other programs will both ensure enforceable limits on visibility impairing pollutants as well as provide a consistent set of requirements for the regulated sources. The EPA also believes that for SO₂ emissions, a mass balance approach to

demonstrating compliance, rather than CEMS, is appropriate for Potline 5. SO₂ from Potline 5 is emitted both from the gas treatment centers air pollution control units (GTC) and the roof vents. Measuring SO₂ emissions from the roof vents with CEMS is not feasible. In addition, a mass balance approach with frequent monitoring of the sulfur in the anodes adequately accounts for the SO₂ emissions from both the GTC and the roof vents. Similarly, restricting BART-eligible units to a particular fuel (e.g., natural gas) and then monitoring the fuel combusted in the units that have no other SO₂ emission controls also adequately accounts for the SO₂ emissions from those units.

Comment: A commenter said that the EPA merged monitoring and compliance demonstration requirements in 40 CFR 52.2502(c)(1)(i) and created ambiguity that requires further clarification.

Response: We agree with the commenter that the proposed rule merged the monitoring and compliance demonstration requirements for the sulfur limit for incoming coke in a way that was confusing. We have reformatted the provision to more clearly specify how compliance is demonstrated for the sulfur limit for incoming coke and the required monitoring to determine the sulfur content of incoming coke. Note that this SO₂ BART limit for the anode bake furnaces does not affect the SO₂ BACT emission limit in the 1982 EPA PSD permit (PSD-X82-04) for Potlines 1 through 3.

Comment: A commenter notes that the emissions in excess of the various BART limits proposed throughout the final rule must not be exceeded one-hundred twenty days after the final rule is published in the Federal Register. The commenter claims a more appropriate compliance date for these emission limits is the requirement to comply with the BART limits “within 120 days of the final rule becoming effective,” not when the final rule is published in the Federal Register. The

EPA should restate the compliance date for the BART requirements affected by this proposed regulation.

Response: We have changed the compliance dates throughout the rule to reflect both the expected effective date of this action as well as to tie the compliance date to the effective date of the final rule. Specifically, the compliance date for the Intalco facility's calendar year SO₂ BART limit is set at January 1, 2015. The compliance date for the NO_x 'test and set' emission limit is 180 days after the effective date of the final rule. The compliance dates for all other BART emission limits are 120 days after the effective date of this action. The compliance date for the Tesoro refinery was also revised to 120 days after the effective date of this action.

IV. Conclusion

EPA is taking final action to partially approve and partially disapprove Washington's SIP for Regional Haze and to promulgate a FIP for the disapproved elements. The EPA is approving portions of the Washington Regional Haze SIP as meeting the requirements of 40 CFR 51.308 for the first planning period and disapproving other portions. The disapproved portions are corrected with today's promulgation of FIP elements.

As discussed above, promulgation of the FIP BART elements for the Tesoro refinery, the Intalco facility, and the Wenatchee Works does not require the purchase or installation new air pollution control equipment, but rather establishes BART based on existing control technology. Thus, the only additional costs incurred by the owners of these facilities will be minimal expenditures for monitoring, reporting, and recordkeeping. EPA expects that this action will prevent visibility degradation in the Class I areas by limiting potential future increases in emissions from changes at the facilities.

V. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563:

Improving Regulation and Regulatory Review

This action finalizes approval of portions of the Washington SIP and a FIP for emission units subject to BART at three facilities. This action is not a “significant regulatory action” under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011). It is therefore not a rule of general applicability.

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* Burden is defined at 5 CFR 1320.3(b). Because the final FIP applies to just three facilities, the Paperwork Reduction Act does not apply. *See* 5 CFR 1320(c).

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions. For purposes of assessing the impacts of today’s final rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration’s (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small

organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field. After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The FIP that the EPA is finalizing for purposes of the regional haze program consists of imposing Federal controls to meet the BART requirements for three specifically identified facilities. The net result of this FIP action is that the EPA is finalizing emission limits on selected units at only three sources which are not considered small business. The sources in question are two aluminum smelters and a petroleum refinery. The final partial approval of the SIP merely approves state law as meeting Federal requirements and does not impose additional requirements.

D. Unfunded Mandates Reform Act (UMRA)

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of UMRA, the EPA generally must prepare a written statement, including a cost-benefit analysis, for final rules with "Federal mandates" that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of \$100 million or more (adjusted for inflation) in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of UMRA generally requires the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 of UMRA do not apply when they are inconsistent with applicable law. Moreover, section 205 of UMRA allows the EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome

alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before the EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of the EPA regulatory actions with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements. Under title II of UMRA, the EPA has determined that this final rule does not contain a Federal mandate that may result in expenditures that exceed the inflation-adjusted UMRA threshold of \$100 million (\$150 in 2013 when adjusted for inflation) by State, local, or Tribal governments or the private sector in any one year. The private sector expenditures that will result from the FIP, including BART emission limits, are insignificant. The BART emission limits for the Alcoa Intalco Operations and Alcoa Wenatchee Works do not involve installation of new control technology, but rather establish BART emission limits based on the existing control technology. The BART Alternative for the Tesoro refinery involves taking credit for voluntary SO₂ emission reductions in-lieu of installing BART-level NO_x control technology on emission units subject to BART. Thus, because the annual expenditures associated with the FIP are less than the inflation-adjusted threshold of \$150 million in any one year, this rule is not subject to the requirements of sections 202 or 205 of UMRA. This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments.

E. Executive Order 13132: Federalism

Executive Order 13132, *Federalism*, (64 FR 43255, August 10, 1999) revokes and replaces Executive Orders 12612 (Federalism) and 12875 (Enhancing the Intergovernmental Partnership). Executive Order 13132 requires the EPA to develop an accountable process to ensure “meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.” “Policies that have federalism implications” is defined in the Executive Order to include regulations that have “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.” Under Executive Order 13132, the EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by state and local governments, or the EPA consults with state and local officials early in the process of developing the final regulation. The EPA also may not issue a regulation that has federalism implications and that preempts state law unless the Agency consults with state and local officials early in the process of developing the final regulation. This rule will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, because it merely addresses the State not fully meeting its obligation under the CAA to include in its SIP provisions to meet the visibility requirements of part C of title I of the CAA and to prohibit emissions from interfering with other states measures to protect visibility. Thus, Executive Order 13132 does not apply to this action.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Executive Order 13175, entitled *Consultation and Coordination with Indian Tribal Governments* (65 FR 67249, November 9, 2000), requires the EPA to develop an accountable process to ensure “meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.” This final rule does not have Tribal implications, as specified in Executive Order 13175 because the SIP and FIP do not have substantial direct effects on Tribal governments. Thus, Executive Order 13175 does not apply to this rule. The EPA nonetheless provided a consultation opportunity to Tribes in Idaho, Oregon and Washington in letters dated January 14, 2011. The EPA received one request for consultation. We followed-up with that Tribe and the Tribe does not think consultation is necessary at this time. On September 20, 2012, EPA provided an additional consultation opportunity to seven Tribes in Washington near the facilities that would be regulated under the FIP. We received no requests for consultation.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

The EPA interprets EO 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the EO has the potential to influence the regulation. This action is not subject to EO 13045 because it implements specific standards established by Congress in statutes.

However, to the extent this final rule will limit emissions of NO_x and PM, the rule will have a beneficial effect on children’s health by reducing air pollution.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (“NTTAA”), Public Law 104–113, 12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs the EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

The EPA believes that VCS are inapplicable to the partial approval of the SIP that if merely approves state law as meeting Federal requirements and imposes no additional requirements beyond those imposed by state law. The FIP portion of this rulemaking involves technical standards. The EPA is using American Society for Testing and Materials (ASTM) Methods and generally accepted test methods previously promulgated by the EPA. Because all of these methods are generally accepted and are widely used by State and local agencies for determining compliance with similar rules, the EPA believes it would be impracticable and potentially confusing to put in place methods that vary from what is already accepted. As a result, the EPA believes it is unnecessary and inappropriate to consider alternative technical standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994), establishes Federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or

environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States. We have determined that this final action will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 804 exempts from section 801 the following types of rules (1) rules of particular applicability; (2) rules relating to agency management or personnel; and (3) rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of non-agency parties. 5 U.S.C. 804(3). The EPA is not required to submit a rule report regarding today's action under section 801 because this is a rule of particular applicability.

L. Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by **[FEDERAL REGISTER OFFICE: insert date 60 days from the date of publication of this document in the Federal Register]**. Pursuant to CAA section 307(d)(1)(B), this action is subject to the requirements of CAA section 307(d) as it promulgates a FIP under CAA section 110(c). Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action

for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. *See* CAA section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Regional haze, Visibility, and Volatile organic compounds.

Dated: May 30, 2014.

Gina McCarthy,
Administrator.

Part 52, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52-[AMENDED]

1. The authority citation for Part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

Subpart WW - Washington

2. Section 52.2470 is amended as follows:

a. In paragraph (d) by adding footnote 1 to the table and adding six entries to the end of the table.

b. In paragraph (e) by adding in TABLE 2—ATTAINMENT, MAINTENANCE, AND OTHER PLANS an entry “Regional Haze SIP” at the end of the section with the heading “Visibility and Regional Haze Plans.”

§52.2470 Identification of plan.

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(d) * * *

EPA—Approved Washington Source-Specific Requirements¹

Name of Source	Order/Permit number	State effective date	EPA approval date	Explanation
* * * * *				
BP Cherry Point Refinery	Administrative Order No. 7836	7/7/2010	[Insert <u>Federal Register</u> publication date] [Insert page number where the document begins]	The following conditions: 1.2, 1.2.1, 1.3, 1.3.2, 1.3.3, 2.2, 2.2.1,2.2.2,2.2.3, 2.2.4, 2.2.5, 2.3, 2.3,1, 2.3.2, 2.4, 2.4.1, 2.4.2, 2.5, 2.5.1, 2.5.2, 2.5.2.1, 2.6, 2.6.1, 2.6.1.1., 2.6.1.2, 2.6.2, 2.6.3, 2.6.4,

				2.7, 2.7.1, 2.7.2, 2.7.3, 2.8, 2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.9, 2.9.1, 2.9.2, 2.9.3, 2.9.4, 2.9.5, 2.9.6, 3., 3.2, 3.2.1, 3.2.2, 3.3, 3.3.1, 3.3.1.1, 3.3.2, 3.3.3, 3.3.4, 4, 4.1, 4.1.1, 4.1.1.1, 4.1.1.2, 4.1.1.3, 4.1.1.4, 5., 6, 6.2, 6.3, 6.4, 7.
Alcoa Intalco Works	Administrative Order No. 7837, Revision 1	11/15/10	[Insert <u>Federal Register</u> publication date] [Insert page number where the document begins]	The following conditions: 1, 2., 2.1, 3., 4., 4.1, Attachment A conditions: A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14.
Tesoro Refining and Marketing Company	Administrative Order 7838	7/7/10	[Insert <u>Federal Register</u> publication date] [Insert page number where the document begins]	The following conditions: 1., 1.1, 1.1.1, 1.1.2, 1.2, 1.3, 1.4, 1.5, 1.5.1, 1.5.1.1, 1.5.1.2, 1.5.1.3, 1.5.2, 1.5.3, 1.5.4, 1.5.5, 1.5.6, 2., 2.1, 2.1.1, 2.1.1.1, 2.1.2, 2.1.3, 2.2, 2.2.1, 3. 3.1, 3.1.1, 3.1.2, 3.1.2.1, 3.1.2.2, 3.1.2.3, 3.2, 3.2.1, 3.2.1.1, 3.2.1.2, 3.2.1.3, 3.2.1.4, 3.2.1.4.1, 3.2.1.4.2, 3.2.1.4.3, 3.2.1.4.4, 3.2.1.4.5, 3.3, 3.3.1, 3.4, 3.4.1, 3.4.2, 4., 4.1, 5.,

				5.1, 6., 6.1, 6.1.1, 6.1.2, 6.1.3, 6.1.4, 7., 7.1, 7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.5, 7.2, 7.2.1, 7.2.2, 7.2.3, 7.2.4, 8. 8.1, 8.1.1, 8.1.2, 8.2, 8.2.1, 8.2.2, 8.2.3, 8.3, 8.3.1, 8.3.2, 9., 9.1, 9.1.1, 9.1.2, 9.2, 9.2.1, 9.39.3.1, 9.3.2, 9.3.3, 9.4, 9.4.1, 9.4.2, 9.4.3, 9.4.5, 9.4.6, 9.5, 10, 11, 12, 13, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6
Port Townsend Paper Corporation	Administrative Order No. 7839, Revision 1	10/20/10	[Insert <u>Federal Register</u> publication date] [Insert page number where the document begins]	The following Conditions: 1, 1.1, 1.2, 1.3, 2, 2.1, 3, 3.1, 4,
Lafarge North America, Inc. Seattle, Wa.	Administrative Revised Order No. 7841	7/28/10	[Insert <u>Federal Register</u> publication date] [Insert page number where the document begins]	The following Conditions: 1, 1.1, 1.2, 2, 2.1, 2.1.1, 2.1.2, 2.2, 2.3, 3, 3.1, 3.1.1, 3.1.2, 3.1.3, 3.2, 3.3, 4, 4.1, 5, 5.1, 5.1.1, 5.1.2, 5.2, 5.3, 6, 6.1, 7, 7.1, 7.2, 7.3, 7.4, 7.5, 8, 8.1, 8.2, 8.3, 8.4, 8.5, 9, 10, 11, 12,
Weyerhaeuser Corporation, Longview, Wa.	Administrative Order No. 7840	7/7/10	[Insert <u>Federal Register</u> publication date] [Insert page number where the document begins]	The following Conditions: 1, 1.1, 1.1.1, 1.1.2, 1.1.3, 1.2, 1.2.1, 1.2.2, 1.2.3, 1.3, 1.3.1, 1.4, 2, 2.1, 3, 3.1, 4, 4.1

¹ The EPA does not have the authority to remove these source-specific requirements in the absence of a demonstration that their removal would not interfere with attainment or maintenance of the NAAQS, violate any

prevention of significant deterioration increment or result in visibility impairment. Washington Department of Ecology may request removal by submitting such a demonstration to the EPA as a SIP revision.

(e) * * *

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TABLE 2—ATTAINMENT, MAINTENANCE, AND OTHER PLANS

Name of SIP provision	Applicable geographic or nonattainment area	State submittal date	EPA approval date	Comments
* * * * *				
Visibility and Regional Haze Plans				
* * * * *				
Regional Haze SIP	State-wide	12/22/10	[Insert <u>Federal Register</u> publication date] [Insert page number where the document begins]	The Regional Haze SIP including those provisions relating to BART incorporated by reference in § 52.2470 ‘Identification of plan’ with the exception of the BART provisions that are replaced with a BART FIP in § 52.2498 Visibility protection., § 52.2500 Best available retrofit technology requirements for the Intalco Aluminum Corporation (Intalco Works) primary aluminum plant – Better than BART Alternative., § 52.2501 Best available retrofit technology (BART) requirement for the Tesoro Refining and

(c) The requirements of sections 169A and 169B of the Clean Air Act are not met because the plan does not include approvable provisions for protection of visibility in mandatory Class I Federal areas, specifically the Best Available Retrofit Technology (BART) requirement for regional haze visibility impairment (§ 51.308(e)). The EPA BART requirements are found in §§ 52.2500, 52.2501, and 52.2502.

5. Section 52.2500 is added to subpart WW to read as follows:

§ 52.2500 Best available retrofit technology requirements for the Intalco Aluminum Corporation (Intalco Works) primary aluminum plant – Better than BART Alternative.

(a) *Applicability.* This section applies to the Intalco Aluminum Corporation (Intalco) primary aluminum plant located in Ferndale, Washington and to its successors and/or assignees.

(b) *Better than BART Alternative – Sulfur dioxide (SO₂) emission limit for potlines.* Starting January 1, 2015, SO₂ emissions from all potlines in aggregate must not exceed a total of 5,240 tons for any calendar year.

(c) *Compliance demonstration.* (1) Intalco must determine on a calendar month basis, SO₂ emissions using the following formula:

SO₂ emissions in tons per calendar month = (carbon consumption ratio) x (% sulfur in baked anodes/100) x (% sulfur converted to SO₂/100) x (2 pounds of SO₂ per pound of sulfur) x (tons of aluminum production per calendar month)

(i) Carbon consumption ratio is the calendar month average of tons of baked anodes consumed per ton of aluminum produced as determined using the baked anode consumption and production records required in paragraph (e)(2) of this section.

(ii) % sulfur in baked anodes is the calendar month average sulfur content as determined in paragraph (d) of this section.

(iii) % sulfur converted to SO₂ is 95%.

(2) Calendar year SO₂ emissions shall be calculated by summing the 12 calendar month SO₂ emissions for the calendar year.

(d) *Emission monitoring.* (1) Intalco must determine the % sulfur of baked anodes using ASTM Method D6376 or an alternative method approved by the EPA Region 10.

(2) Intalco must collect at least four anode core samples during each calendar week.

(3) Calendar month average sulfur content shall be determined by averaging the sulfur content of all samples collected during the calendar month.

(e) *Recordkeeping.* (1) Intalco must record the calendar month SO₂ emissions and the calendar year SO₂ emissions determined in paragraphs (c)(1) and (c)(2) of this section.

(2) Intalco must maintain records of the baked anode consumption and aluminum production data used to develop the carbon consumption ratio used in paragraph (c)(1)(i) of this section.

(3) Intalco must retain a copy of all calendar month carbon consumption ratio and potline SO₂ emission calculations.

(4) Intalco must record the calendar month net production of aluminum and tons of aluminum produced each calendar month. Net production of aluminum is the total mass of molten metal produced from tapping all pots in all of the potlines that operated at any time in the calendar month, measured at the casthouse scales and the rod shop scales.

(5) Intalco must record the calendar month average sulfur content of the baked anodes.

(6) Records are to be retained at the facility for at least five years and be made available to the EPA Region 10 upon request.

(f) *Reporting.* (1) Intalco must report the calendar month SO₂ emissions and the calendar year SO₂ emissions to the EPA Region 10 at the same time as the annual compliance certification required by the Part 70 operating permit for the Intalco facility is submitted to the Title V permitting authority.

(2) All documents and reports must be sent to the EPA Region 10 electronically, in a format approved by the EPA Region 10, to the following email address:

R10-AirPermitReports@epa.gov

6. Section 52.2501 is added to subpart WW to read as follows:

§ 52.2501 Best available retrofit technology (BART) requirement for the Tesoro Refining and Marketing Company oil refinery – Better than BART Alternative.

(a) *Applicability.* This section applies to the Tesoro Refining and Marketing Company oil refinery (Tesoro) located in Anacortes, Washington and to its successors and/or assignees.

(b) *Better than BART Alternative.* The sulfur dioxide (SO₂) emission limitation for non-BART eligible process heaters and boilers (Units F-101, F-102, F-201, F-301, F-652, F-751, and F-752) follows.

(1) *Compliance Date.* Starting no later November 10, 2014, Units F-101, F-102, F-201, F-301, F-652, F-751, and F-752 shall only fire refinery gas meeting the criteria in paragraph (b)(2) of this section or pipeline quality natural gas.

(2) *Refinery fuel gas requirements.* In order to limit SO₂ emissions, refinery fuel gas used in the units from blend drum V-213 must not contain greater than 0.10 percent by volume hydrogen sulfide (H₂S), 365-day rolling average, measured according to paragraph (d) of this section.

(c) *Compliance demonstration.* Compliance with the H₂S emission limitation must be demonstrated using a continuous emissions monitoring system as required in paragraph (d) of this section.

(d) *Emission monitoring.* (1) A continuous emissions monitoring system (CEMS) for H₂S concentration must be installed, calibrated, maintained and operated measuring the outlet stream of the fuel gas blend drum subsequent to all unmonitored incoming sources of sulfur compounds to the system and prior to any fuel gas combustion device. The monitor must be certified in accordance with 40 CFR part 60 appendix B and operated in accordance with 40 CFR part 60 appendix F.

(2) Tesoro must record the calendar day average H₂S concentration of the refinery fuel gas as measured by the CEMS required in paragraph (d)(1) of this section. The daily averages must be used to calculate the 365-day rolling average.

(e) *Recordkeeping.* Records of the daily average H₂S concentration and 365-day rolling averages must be retained at the facility for at least five years and be made available to the EPA Region 10 upon request.

(f) *Reporting.* (1) Calendar day and 365-day rolling average refinery fuel gas H₂S concentrations must be reported to the EPA Region 10 at the same time that the semi-annual monitoring reports required by the Part 70 operating permit for the Tesoro oil refinery are submitted to the Title V permitting authority.

(2) All documents and reports must be sent to the EPA Region 10 electronically, in a format approved by the EPA Region 10, to the following email address:

R10-AirPermitReports@epa.gov

7. Section 52.2502 is added to subpart WW to read as follows:

§ 52.2502 Best available retrofit technology requirements for the Alcoa Inc. - Wenatchee Works primary aluminum smelter.

(a) *Applicability.* This section applies to the Alcoa Inc. – Wenatchee Works primary aluminum smelter (Wenatchee Works) located near Wenatchee, Washington and to its successors and/or assignees.

(b) *Best available retrofit technology (BART) emission limitations for Potline 5-- (1) Sulfur dioxide (SO₂) emission limit.* Starting November 10, 2014, SO₂ emissions from Potline 5 must not exceed 46 pounds per ton of aluminum produced during any calendar month as calculated in paragraph (b)(1)(i) of this section.

(i) *Compliance demonstration.* Alcoa must determine SO₂ emissions, on a calendar month basis using the following formulas:

SO₂ emissions in pounds = (carbon ratio) x (tons of aluminum produced during the calendar month) x (% sulfur in baked anodes/100) x (% sulfur converted to SO₂/100) x (2 pounds of SO₂ per pound of sulfur)

SO₂ emissions in pounds per ton of aluminum produced = (SO₂ emissions in pounds during the calendar month) / (tons of aluminum produced during the calendar month)

(A) The carbon ratio is the calendar month average of tons of baked anodes consumed per ton of aluminum produced as determined using the baked anode consumption and aluminum production records required in paragraph (h)(2) of this section.

(B) The % sulfur in baked anodes is the calendar month average sulfur content as determined in paragraph (b)(1)(ii) of this section.

(C) The % sulfur converted to SO₂ is 90%.

(ii) *Emission monitoring.* The % sulfur of baked anodes must be determined using ASTM Method D6376 or an alternative method approved by the EPA Region 10.

(A) At a minimum, Alcoa must collect no less than four baked anode core samples during each calendar week.

(B) Calendar month average sulfur content must be determined by averaging the sulfur content of all samples collected during the calendar month.

(2) *Particulate matter (PM) emission limit.* Starting November 10, 2014, PM emissions from the Potline 5 Gas Treatment Center stack must not exceed 0.005 grains per dry standard cubic foot of exhaust gas.

(3) *Nitrogen oxides (NO_x) emission limit.* Starting January 7, 2015, NO_x emissions from Potline 5 must not exceed, in tons per calendar month, the emission limit determined under paragraph (b)(3)(iii) of this section.

(i) *Compliance demonstration.* Alcoa must determine NO_x emissions, on a calendar month basis using the following formula:

NO_x emissions in tons per calendar month = (the emission factor determined under paragraph (b)(3)(ii) of this section, in pounds of NO_x per ton of aluminum produced) x (number of tons of aluminum produced in the calendar month) / (2000 pounds per ton).

(ii) *NO_x emission factor development.* By **[Insert date 90 days from the date of publication in the Federal Register]**, Alcoa must submit to the EPA a plan for testing NO_x emissions from Potline 5 and developing an emission factor in terms of pounds of NO_x per ton of aluminum produced. This plan must include testing NO_x emissions from both the Gas Treatment Center stack and the potline roof vents along with measurements of volumetric flow and aluminum production such that mass emissions can be determined and correlated with aluminum

production. Within 90 days after the EPA approval of the plan, Alcoa shall conduct the testing and submit the resultant emission factor to the EPA at the address listed in paragraph (i)(5) of this section.

(iii) *NO_x emission limit.* NO_x emission limit in tons per calendar month = (the emission factor determined under paragraph (b)(3)(ii) of this section, in pounds of NO_x per ton of aluminum produced) x (5546.2 tons of aluminum per month) / (2000 pounds per ton).

(c) *Best available retrofit technology (BART) emission limitations for Anode Bake Furnace #62--*

(1) *Sulfur dioxide (SO₂) emission limit.* Starting November 10, 2014, the sulfur content of the coke used in anode manufacturing must not exceed a weighted average of 3.0 percent during any calendar month as calculated in paragraph (c)(1)(i) of this section.

(i) *Compliance demonstration.* The weighted monthly average sulfur content of coke used in manufacturing shall be calculated as follows:

$$\text{Weighted average percent sulfur} = \frac{\sum(C_{1-n} \times SC_{1-n} / 100)}{\sum C_{1-n}} * 100$$

where:

C_n is the quantity of coke in shipment n in tons

SC_n is the percent sulfur content by weight of the coke in shipment n

n is the number of shipments of coke in the calendar month

(ii) *Emission monitoring.* Alcoa must test each shipment of coke for sulfur content using ASTM Method D6376 or an alternative method approved by the EPA Region 10. Written documentation from the coke supplier certifying the sulfur content is an approved alternative method.

(2) *Particulate matter (PM) emission limit.* Starting November 10, 2014, the PM emissions from the anode bake furnaces stack must not exceed 0.01 grains per dry standard cubic foot of exhaust gas.

(3) *Nitrogen oxides (NO_x) emission limit.* Starting November 10, 2014, the anode bake furnaces must only combust natural gas.

(i) *Compliance demonstration.* Compliance shall be demonstrated through fuel purchase records.

(ii) *Best Available Retrofit Technology (BART) Nitrogen oxides (NO_x) emission limit for an approved alternative fuel.* Compliance with a Best Available Control Technology (BACT) emission limit for NO_x for the anode bake furnaces, established in a Prevention of Significant Deterioration (PSD) permit issued pursuant to 40 CFR 52.21 or pursuant to an EPA-approved PSD program that meets the requirements of 40 CFR 51.166, shall be deemed to be compliance with BART for a fuel other than natural gas.

(d) *Best available retrofit technology (BART) emission limitations for Ingot Furnace 1 (IP-1), Ingot Furnace 2 (IP-2), and Ingot Furnace 11 (IP-11)—(1) Particulate matter (PM) emission limits.* Starting November 10, 2014, the PM emissions from each of ingot furnaces IP-1, IP-2, and IP-11 must not exceed 0.1 grains per dry standard cubic foot of exhaust gas.

(2) *Nitrogen oxides (NO_x) emission limit.* Starting November 10, 2014, each of the ingot furnaces IP-1, IP-2, and IP-11 must only combust natural gas.

(3) *Sulfur dioxide (SO_x) emission limit.* Starting November 10, 2014, each of the ingot furnaces IP-1, IP-2, and IP-11 must only combust natural gas.

(i) *Compliance demonstration.* Alcoa must demonstrate compliance through fuel purchase records.

(ii) [Reserved]

(e) *Best available retrofit technology (BART) particulate matter (PM) emission limitations for the Green Mill.*

(1) Starting November 10, 2014, the PM emissions from the Green Mill Dry Coke Scrubber must not exceed 0.005 grains per dry standard cubic foot of exhaust gas.

(2) Starting November 10, 2014, the PM emissions from the Green Mill Dust Collector 2 must not exceed 0.01 grains per dry standard cubic foot of exhaust gas.

(f) *Best available retrofit technology (BART) particulate matter (PM) emission limitations for alumina handling operations.*

(1) Starting November 10, 2014, the opacity from the alumina handling fabric filters (21M and 19C) must not exceed 20 percent.

(2) Starting November 10, 2014, the PM emissions from the alumina rail car unloading baghouse (43E) must not exceed 0.005 grains per dry standard cubic foot of exhaust gas.

(g) *Source testing.* (1) Alcoa must perform source testing to demonstrate compliance with emission limits established in this section upon request by the EPA Region 10 Administrator.

(2) The reference test method for measuring PM emissions is EPA Method 5 (40 CFR part 60, appendix A).

(3) The reference test method for measuring opacity from the alumina handling fabric filters (21M and 19C) is EPA Method 9 (40 CFR part 60, appendix A).

(4) The EPA Region 10 may approve the use of an alternative to a reference test method upon an adequate demonstration by Alcoa that such alternative provides results equivalent to that of the reference method.

(h) *Recordkeeping.* Except as provided in paragraph (h)(6) of this section, starting November 10, 2014, Alcoa must keep the following records:

(1) Alcoa must retain a copy of all calendar month Potline 5 SO₂ emissions calculations.

- (2) Alcoa must maintain records of the baked anode consumption and aluminum production data used to develop the carbon ratio.
 - (3) Alcoa must retain a copy of all calendar month carbon ratio and potline SO₂ emission calculations.
 - (4) Alcoa must record the calendar day and calendar month production of aluminum.
 - (5) Alcoa must record the calendar month average sulfur content of the baked anodes.
 - (6) Starting January 7, 2015, Alcoa must retain a copy of all calendar month potline NO_x emission calculations.
 - (7) Alcoa must record the sulfur content of each shipment of coke and the quantity of each shipment of coke.
 - (8) Alcoa must keep fuel purchase records showing the type(s) of fuel combusted in the anode bake furnaces.
 - (9) Alcoa must keep fuel purchase records showing the types(s) of fuel combusted in the ingot furnaces.
 - (10) Records must be retained at the facility for at least five years and be made available to the EPA Region 10 upon request.
- (i) *Reporting.* (1) Alcoa must report SO₂ emissions by calendar month to the EPA Region 10 on an annual basis at the same time as the annual compliance certification required by the Part 70 operating permit for the Wenatchee Works is submitted to the Title V permitting authority.
- (2) Alcoa must report NO_x emissions by calendar month to the EPA Region 10 on an annual basis at the same time as the annual compliance certification required by the Part 70 operating permit for the Wenatchee Works is submitted to the Title V permitting authority.

(3) Alcoa must report the monthly weighted average sulfur content of coke received at the facility for each calendar month during the compliance period to the EPA Region 10 at the same time as the annual compliance certification required by the Part 70 operating permit for the Wenatchee Works is submitted to the Title V permitting authority.

(4) Alcoa must report the fuel purchase records for the anode bake furnaces and the ingot furnaces during the compliance period to the EPA Region 10 at the same time as the annual compliance certification required by the Part 70 operating permit for the Wenatchee Works is submitted to the Title V permitting authority.

(5) All documents and reports must be sent to the EPA Region 10 electronically, in a format approved by the EPA Region 10, to the following email address: R10-AirPermitReports@epa.gov

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